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The **SARC Communicator** is published monthly for members of the Surrey Amateur Radio Club.

SARC maintains a website at www.ve7sar.net that includes club history, meetings, news and other information.



Tower Take-down

They Make It Look Easy



Over what were likely to be the two last sunny days of the Fall, several members of SARC got together in Port Coquitlam to take down a 56 ft. Delhi tower and Hy-Gain TH7DX beam owned by Lois McCrady VE7PNP, whose

husband VE7NPN had recently passed away. The equipment was kindly donated to the Surrey Club with the understanding that we do the take-down before winter.

The project started with some chain saw work by Don VA7GL and Fred VE7IO to remove a tree that had intertwined itself into the tower. Kelvin VA7KPH volunteered to undertake the most difficult part of the job, which was installing the gin pole and preparing the beam for removal. Owing to the close proximity of tree branches in the yard, which had grown up around the installation, the boom was first separated at the centre joint, allowed to collapse and the beam lowered to the ground in two pieces.

Then disassembly of the tower itself began, by Gord Kirk VE7GRK who unbolted and lowered the top 3 sections the first day using the gin pole, and the last 4 sections the second day. Assistants on the ground included Fred VE7IO who provided expert guidance for the team, Don VA7GL, Chris VA7CMZ and John VA7XB who handled ropes and disassembly of the beam.

The tower has now been put into temporary storage pending a decision on how it can be best put to use. Amazingly, there was no significant damage to the beam after 25 years in service. The TH7DX has been taken apart, cleaned up and prepared for some minor parts replacement, then it will proudly crown our 100 ft. mobile tower, donated last year by Telus. The old tri-bandner will likely be put

out to pasture as it has seen faithful service at many field days in the past decade, but is now showing signs of age.

More photos page on page 4.



Meeting Minutes

Gord Kirk VE7GRK—SARC Secre-



November 2010 General Meeting

Please remember that membership dues are now payable, and should be paid by December 20th at the latest. This is important as our RAC insurance premium will depend on having an accurate listing of members.

The general meeting was started at 7:00 pm President John Brodie VA7XB. 20 people were in attendance at the Surrey PREOC. John introduced Kevin McQuiggin VE7ZD our speaker for later in the evening.

1. Bylaw Update

Gordon VE7GRK reported that the amended bylaws voted on at the AGM have now been accepted and registered in Victoria.

2. Ham Class

Gary VE7AS reported they are in week 8 of 9 classes. There are 8 students and all is going well. The exam is Nov 25th.

3. Newbie Course

There will be a newbie seminar on November 27th 9am—Noon at the LDS Church, 6270 126th Street, Surrey. Please confirm attendance with Gary VE7AS@rac.ca. It covers where the Basic course leaves off. Needs 6-10 students to go ahead.

4. CW Course

A discussion to determine if there was interest to plan for another CW course occurred. Please contact John VA7XB to let him know.

5. Treasurer's Report

\$3922.00 in the main bank account with approx \$1000.00 in the ING savings.

6. SEPARS Report

Exercises will be happening once per month with Langley. The next one will happen the third Saturday in November. Monthly workshops will be starting. The combined SARC/SEPARS garage sale raised \$828.15 to be shared between the groups.

7. RAC Report

Bill Gipps was not available with a report.

8. Christmas Party

Saturday December 13th at the ABC Restaurant located at 74th/King George Boulevard. Cost is \$20 per person. Please RSVP with Bill VE7ZBL SEPARS members are also invited to

attend. Several key supporters of SARC have been invited as guests. A special speaker may be attending (TBA).

9. Trailers

Comprehensive insurance has been purchased for both trailers. We are also buying locks to secure these two units.

10. BC Radio Sport.

A mobile fox hunt will be happening this coming weekend meeting to start at Robert Burnaby Park. Information is available on our website.

11. Field Day Site

Grandview Heights School located at 176th/20th has been recommended by the executive as the preferred site. It will be free with the support of Surrey Fire Services.

12. Repeater Location.

This is still in the works and moving through the paperwork process with the site owners.

13. Lottery Application.

Still in progress no update.

14. Website.

A discussion on updating some website functionality occurred. Why members and other go to the site, what they like, dislike and would see a value in adding was discussed. A group including Kelvin, Sue and Hiu will try to set up a meeting together to discuss this.

15. DX Club Report

72 members in this group

16. Kevin McQuiggin VE7ZD gave his presentation on Amateur Radio and Innovation.

SARC EXECUTIVE FOR 2010-2011

PRESIDENT
John Brodie VA7XB

VICE PRESIDENT
Don Hamilton VA7GL

SECRETARY
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John Schouten VE7TI
Gary Skett VE7AS
Chris Zetner VA7CMZ

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SEPARS Report

Fred Orsetti VE7IO



Monthly Exercise With Langley

The October monthly exercise with Langley went well 13 messages were sent from the EOC radio room at hall #1 in Surrey and we received 7 messages from Langley, VE7LNC.

Some areas that were identified as needing attention before the November test.

- The antenna used by our NC op was barely adequate.
- The message flow through the room was smooth however we are using desktop baskets for received and sent messages which take up too much space so we will replace them with holders that mount above the desktop and out of the way.
- Radios operating on close, 30 KHz, proximity were badly de-sensed making passing traffic difficult.
- D-Rats did not work well for us so this is going to require a much better understanding of the program along with more training and de-bugging.
- Use of tactical call signs was suggested
- Some housekeeping issues such as relocating station labels etc for ease of identification.

Monthly Workshop

SEPARS will be holding our first monthly workshop on November 18th with the first part of the workshop social with Pizza and refreshments. The work side of the evening will be a discussion on how to improve for the next exercise. As well, we will have a light training session on NC so bring along your hand held radios. The workshop is scheduled to last 2 ½ hours.

SEPARS and SARC held a **joint garage sale** at Fred's QTH on Saturday and Sunday October 23 and 24 with the items we acquired from Andy Lo at the Surrey Fire Services. It was very well attended and the weather of the Saturday was sunny and warm Sunday was not so good with rain in the afternoon. Most of the items were sold on Saturday and we ended up with a small truckload to take to the Maple Ridge flea market on Sunday November 7th. We had two tables and the floor covered at the flea market

but I am happy to report that all items sold and we came home with empty bins, this was a fantastic event for both SEPARS and SARC.



As a bonus we ended up with some excellent shelving that we installed at Fire Hall #10 making our space there very neat and items easily accessed.

The new format for the **SEPARS weekly net** is going well with some minor adjustments to the script. Check-ins have increased and the practice message portion of the net is now working much better. I am hoping that we will continue to see the check-in numbers rise and more members taking advantage of the message training.

We are waiting for word on our **Lottery grant** and at this time the status is "In Progress" so at least I think we are still alive.

The **new HiQ antenna** is currently being put through some testing by Marcy, VE7JT, who reports that it is working very well. If the grant money is forthcoming we will purchase two more HiQ antennas which will give us one antenna per kit.

Activities Coming Up This Month

- The first monthly workshop for SEPARS on November 18th;
- Exercise with Langley on November 20th;
- The volunteer appreciation dinner on November 24th (we have a presentation at the dinner this year).

I am looking forward to seeing everyone at the SEPARS meeting and the awards dinner.

Tower Take-down

Continued from page 1



Here are the photos from the tower take down we did last month. Notice the expert disassembly planning used by Kelvin to bring that large beam down amidst the nearby trees.

q r m QRM

News You Can Use

At our October meeting, Bill Gipps led a discussion on the club's goals for the future. Members were asked what they enjoyed about SARC... and what they did not. The following are some of the observations from that meeting.

Likes

- Fellowship and social events
- Friday morning breakfast
- Opportunities for learning (good speakers)
- Opportunities to participate in contests as a club
- Public service (parades etc.)

Dislikes

- Too many members pay their dues but don't show up and support club events.
- The repeater doesn't get sufficient usage
- We need a club station where members can come to operate

- Some believe that emergency communication should not be part of club activities

Others expressed the view that both the duty side (emcomm) and the hobby side should be supported and be part of SARC's vision

We don't do enough of the real ham stuff, i.e. construction projects

What activities would you like to see SARC do in the future?

- Continue with summer flea market
- Continue working with other clubs
- Establish a club station
- Construction projects

We hope that you were able to share your vision for the club going forward. If not, send your thoughts along. Your club executive is anxious to make your participation as worthwhile as possible.

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Kevin VE7ZD

At SARC's Nov. 10th meeting, we were privileged to hear Kevin McQuiggin VE7ZD give a lively presentation about the subject of his Master's thesis on "[Innovations in Communication Technology through Amateur Radio](#)".

Kevin's theme was that amateur radio operators, whether or not trained as engineers or scientists, have the unique skills and motivation to develop new methods of communication, unconstrained by any requirement that they have commercial application.

He gave many examples of this throughout the 100 years of radio history, including use of the shorter HF wavelengths in the early days of radio and up into the microwave range much later, to the development of single sideband (SSB) half a century ago, to more modern examples such as Internet Radio Linking Project (IRLP), slow scan TV, and automatic packet reporting system (APRS). In fact, many techniques used commercially today were first developed by amateurs out of a desire to accomplish things never done before, and having no foreseeable commercial application.

He emphasized that we should be proud of these accomplishments and remind the regulators, such as Industry Canada, of the value of a proud history of achievement so that they will protect spectrum space and ensure that amateur radio can thrive within an environment that encourages innovation.

Many thanks to Kevin for presenting a very positive message about ham radio past, present and future.



SURREY AMATEUR RADIO CLUB
Cordially Invites You to its Annual

CHRISTMAS PARTY

Saturday, December 11th
11 am to 2 pm

ABC FAMILY RESTAURANT
7380 King George Highway
Surrey, BC

PLEASE RSVP TO
Bill Little mojocrew@telus.net

Enjoy a buffet lunch of salad, roast beef with all the fixings followed by your choice of dessert and beverage

This is our annual event where we celebrate our friendships and recognize those members who have made an extraordinary contribution to the Surrey Amateur Radio Club and amateur radio generally.

Cost is \$20 per head, which includes a buffet lunch and a chance to win one of several great door prizes. Spouses and other family members are cordially invited to attend. Please join us.



Ham-Speak

Automatic Packet Reporting System

APRS is an amateur radio-based system for real time tactical digital communications of information of immediate value in the local area. In addition, all such data is ingested into the APRS Internet system (APRS-IS) and distributed globally for immediate access. Along with messages, alerts, announcements and bulletins, the most visible aspect of APRS is its map display. Anyone may place any object or information on his or her map, and it is distributed to all maps of all users in the local RF network or monitoring the area via the Internet. Any station, radio or object that has an attached GPS is automatically tracked. Other prominent map features are weather stations, alerts and objects and other map-related amateur radio volunteer activities including Search and Rescue and signal direction finding.

APRS has been developed since the late 1980s by Bob Bruninga, callsign WB4APR, currently a senior research engineer at the United States Naval Academy. He still maintains the main APRS website. The acronym "APRS" was derived from his callsign.

In its simplest implementation, APRS is used to transmit real-time data, information and reports of the exact location of a person or object via a data signal sent over amateur radio frequencies. In addition to real-time position reporting capabilities using attached Global Positioning System receivers, APRS is also capable of transmitting a wide variety of data, including weather reports, short text messages, radio direction finding bearings, telemetry data, short e-mail messages (send only) and storm forecasts. Once transmitted, these reports can be combined with a computer and mapping software to show the transmitted data superimposed with great precision upon a map display.

While the map plotting is the most visible feature of APRS, the text messaging capabilities and local information distribution capabilities combined with the robust network should not be overlooked; the New Jersey Office of Emergency Management has an extensive network of APRS stations to allow text messaging between all of the county Emergency Operating Centers in the event of the failure of conventional communications. For further information <http://www.openaprs.net/>

Application Notes

Gary Skett VE7AS



The Decibel

Author's Note: All references to "telephone company" and "telephone company engineers" are based on anecdotal evidence rather than historical fact, so the author apologizes for any inaccuracies.

General. The decibel, or dB, is a means of expressing the gain of an active device (such as an amplifier) or the loss in a passive device (such as an attenuator or length of cable). It is simply the ratio of output to input expressed in logarithmic form. The decibel was developed by the telephone company to express the gain or loss in telephone transmission systems, and is best understood by first discussing the rationale for its development.

If we have two cascaded amplifiers as shown below, with power gain factors A1 and A2 as indicated, the total gain is the product of the individual gains, or $A1 \times A2$.

Input >----- Amp #1 ----- Amp #2 -----> Output
 $A1 = 275 \dots\dots\dots A2 = 55$

In the example, the total gain factor $A_t = 275 \times 55 = 15,125$.

Now, imagine for a moment what it would be like to calculate the total gain of a string of amplifiers. It would be a cumbersome task at best, and especially so if there were portions of the cascade which were lossy and reduced the total gain, thereby requiring division as well as multiplication.

It was primarily for the reason stated above that Bell Telephone developed the decibel. Thinking back to the rules for logarithms, we recall that rather than multiplying two numbers we can add their logarithms and then take the antilogarithm of this sum to find the product we would have gotten had we multiplied the two numbers.

Mathematically, $\log(A \times B) = \log A + \log B$

If we want to divide one number into another, we subtract the logarithm of the divisor from the logarithm of the dividend, or in other words

$\log(A/B) = \log A - \log B$

The telephone company apparently decided that it might be convenient to handle gains and losses this way since it would simplify transmission path calculations. It is also possible that the fact that the human ear's response to sound is logarithmic may have influenced this decision. In any event, a new unit of gain measurement was invented and called the "Bel," after Alexander Graham Bell. The Bel was defined as

Gain in Bels = $\log A$

Where A = Power amplification factor

Going back to our example, we find that $\log 275 = 2.439$ and $\log 55 = 1.740$, so the total gain in our cascade is

$2.439 + 1.74 = 4.179$ Bels

It probably occurred rather quickly to telephone company engineers that using Bels meant they would be working to at least two decimal places. They couldn't just round things off to one decimal place, since 4.179 bels is a power gain of 15,101 while 4.2 bels is a power gain of 15,849, yielding an error of about 5%. At that point it was decided to express power gain in units which were equal to one-tenth of a Bel, or in deci-Bels. This simply meant that the gain in Bels would be multiplied by 10, since there would be ten times more decibels than Bels. This changes the formula to

Gain in decibels (dB) = $10 \log A$ (Eq. 1)

Again using our example, the gain in the cascade is now

$24.39 + 17.40 = 41.79$ decibels

The answer above is accurate, convenient to work with, and can be rounded off to the first decimal place with little loss in accuracy; 41.79 dB is a power gain of 15,101, while 41.8 dB is a power gain of 15,136, so the error is only 0.23%.

What if the power gain factor is less than one, indicating an actual power loss? The calculation is performed as shown above using Equation 1, but the result will be different. Suppose we have a device whose power gain factor is 0.25, which means that it only outputs one-fourth of the power fed into it? Using Equation 1, we find

$G = 10 \log (0.25)$

$G = 10 (-0.60)$

$G = -6.0$ dB

The minus sign occurs because the logarithm of any number less than 1 is always negative. This is convenient, since a power loss expressed in dB will always be a negative number.

Using the Decibel

There are two common methods of using the decibel. The first is to express a power gain factor in dB as just described; the second is to determine the power gain factor and convert it to dB, which can all be done in one calculation. The formula for this operation is as follows:

P_o

$G = 10 \log \text{----} \text{ (Eq. 2)}$

P_i

Where G = Gain in dB P_o = Power output from the device P_i = Power input to the device

Both P_o and P_i should be in the same units; i.e., watts, milliwatts, etc. Note that Equation 2 deals with power, not voltage or current; these are handled differently when converted to dB and are covered later. Below are two examples of the correct application of Equation 2:

Ex. 1: An amplifier supplies 3.5 watts of output with an input of 20 milliwatts. What is the gain in dB?

$$G = 10 \log \frac{3.5 \text{ watts}}{0.02 \text{ watts}}$$

$$G = 10 \log (175)$$

$$G = 10 (2.24)$$

$$G = 22.4 \text{ dB}$$

Ex. 2: A length of coaxial transmission line is being fed with 150 watts from a transmitter, but the power measured at the output end of the line is only 112 watts. What is the line loss in dB?

$$G = 10 \log \frac{112 \text{ watts}}{150 \text{ watts}}$$

$$G = 10 \log 0.747$$

$$G = 10 (-0.127)$$

$$G = -1.27 \text{ dB}$$

Alternative Calculation Methods

It is also possible to calculate gain or loss in decibels using voltage or current measurements rather than power measurements. Power is the product of voltage and current, and is also defined as the square of the current times the circuit resistance or the square of the voltage divided by the circuit resistance. The mathematical expressions for power are

$$P = EI \quad P = I^2R \quad P = E^2/R$$

Where P = power E = voltage I = current R = resistance

Power will thus vary as the square of the voltage or current, so if either voltage or current ratios are measured in a circuit the decibel representation of that ratio will be found from

$$\text{dB} = 20 \log E1/E2 \text{ *OR* } \text{dB} = 20 \log I1/I2 \text{ (Eq. 3)}$$

CAUTION: The circuit resistance must be the same for the two voltage or current measurements, otherwise calculating a dB value will give an erroneous answer.

The following is an example of the same kind of calculation shown previously except that a voltage ratio is used instead of a power ratio (Equation 3):

Ex. 3. An audio engineer measures the RMS voltage level of a test tone at the output of an amplifier running at maximum gain setting and finds it to be 6 volts. He then measures the RMS level of the input signal and finds it to be 135 millivolts. If both the input and output impedances of the amplifier are 600 ohms, what is the gain of the amplifier?

$$G = 20 \log 6\text{volts}/0.135$$

$$G = 20 \log (44.444)$$

$$G = 20 (1.65)$$

$$G = 32.9 \text{ dB}$$

NOTE: As an exercise, the reader is encouraged to convert the output and input voltages to power in watts using the stated output/input impedance, and then to calculate the amplifier gain in dB using Equation 2. If the mathematics are done correctly the answer will be the same.

To further expound on the need for maintaining the same reference impedance when calculating decibel gain or loss using voltage (or current), let's consider what will happen in the example above if the input impedance is 600 ohms as stated but the output impedance is 16 ohms.

If we do the calculation using Equation 3 we arrive at the same answer shown in Example 3; if, however, we first convert to power levels using the impedances just stated we find that the input power is 3.04E-5 watts, while the output power is 2.25 watts. Substituting these two values in Equation 2 (for power):

$$G = 10 \log \frac{2.25 \text{ watts}}{3.04\text{E-}5 \text{ watts}}$$

$$G = 10 \log (74,074.1)$$

$$G = 10 (4.87)$$

$$G = 48.7 \text{ dB}$$

Big difference! If the impedances are not equal, the answer found by using Equation 3 is in error by almost 16 dB! This should point out the need for caution in ensuring that impedance levels are constant when using voltage (or current) for decibel calculations. Remember that an audio (or RF) voltmeter doesn't know what the impedance of the circuit is; it simply registers voltage. In addition, some voltmeters are designed to operate at a certain impedance level, so if the circuit impedance is some other value the voltage reading itself may be erroneous, throwing yet more confusion into the calculation process. Caution is ever the watchword!

Some Rules of Thumb

As with many other mathematical or technical concepts, there are some easy-to-remember "rules of thumb" which can make calculating with decibels much easier. Here are several which will make working with decibels simpler when you don't have a calculator handy:

- A power ratio of 2 is equal to 3 dB. Conversely, a power ratio of 1/2 is equal to -3 dB. (NOTE: The -3 dB point is often referred to as a "half-power point," as when describing, say, a frequency response curve.)
- A voltage or current ratio of 2 is equal to 6 dB. Conversely, a voltage or current ratio of 1/2 is equal to -6 dB.

- c) A power ratio of 10 is equal to 10 dB. Conversely, a power ratio of 1/10 is equal to -10 dB.
- d) A voltage or current ratio of 10 is equal to 20 dB. Conversely, a voltage or current ratio of 1/10 is equal to -20 dB.

Here is an example of how the rules of thumb can be useful:

Ex. 5: A spurious signal specification for a transmitter states that the maximum level of any spurious signal shall not exceed -36 dB relative to the output power. If the output power is 5 watts, what is the maximum permissible level for spurs?

- a) Since -10 dB is 1/10th, then -20 dB is 1/100th (or 1/10th of 1/10th) and -30 dB is 1/1000th (or 1/10th of 1/10th of 1/10th). So 30 dB below our 5 watt output power becomes $1/1000 \times 5 = 0.005$ watts.
- b) For the additional -6 dB, remember that -3 dB = 1/2, so -6 dB = 1/4th (or 1/2 of 1/2). Thus, our 0.005 watts previously calculated becomes $.005 \times 1/4 = 0.00125$ watts, or 1.25 milliwatts. This is the maximum power level any spur can have if the transmitter is to meet the stated specification.

Uses of the Decibel with a Defined Reference

The most common "defined reference" use of the decibel is the dBm, or decibels relative to a power level of one milliwatt. It is different from the dB because it uses the same specific, measurable power level as a reference in all cases, whereas the dB is relative to whatever reference a particular user chooses or even to no reference at all.

The difference between "relative" and "defined reference" can be understood easily by considering temperature. For example, if I say that it is "20 degrees colder now than it was this morning," it's a relative measurement; unless the listener knows how cold it was this morning, there is no reference for comparison.

If, however, I say, "It was 20 degrees C this morning, but it's 20 degrees colder now," then the listener knows exactly what is meant; it is now 0 degrees C. This can be measured on a thermometer and is referenced to a defined temperature scale. So it is with dB and dBm. A dB has no particular defined reference while a dBm is referenced to a specific quantity: the milliwatt (1/1000 of a watt).

{NOTE: The IEEE definition of dBm is "a unit for expression of power level in decibels with reference to a power of 1 milliwatt." Note that no mention is made of the value of circuit impedance; the dBm is merely an expression of power present in a circuit relative to a known fixed amount (i.e., 1 milliwatt) and the circuit impedance is irrelevant.}

We can apply this concept to Equation 1 as follows:

$$\text{dBm} = 10 \log (P) \text{ (1000 mW/watt)}$$

Where dBm = Power in dB referenced to 1 milliwatt P = Power in watts

For example, take the case where we have a power level of 1 milliwatt:

$$\text{dBm} = 10 \log (0.001 \text{ watt}) \text{ (1000 mW/watt)}$$

$$\text{dBm} = 10 \log (1)$$

$$\text{dBm} = 10 (0)$$

$$\text{dBm} = 0$$

Thus, we see that a power level of 1 milliwatt is 0 dBm. This makes sense intuitively, since our reference power level is also 1 milliwatt. If the power level was 1 watt, however, we find that

$$\text{dBm} = 10 \log (1 \text{ watt}) \text{ (1000 mW/watt)}$$

$$\text{dBm} = 10 (3)$$

$$\text{dBm} = 30$$

The dBm can also be negative, just like the dB; if our power level is 1 microwatt, we find that

$$\text{dBm} = 10 \log (1 \times 10^{-6} \text{ watt}) \text{ (1000 mW/watt)}$$

$$\text{dBm} = -30 \text{ dBm}$$

Since the dBm has a defined reference it can be converted back to watts if desired. Since it is in logarithmic form it may also be conveniently combined with other dB terms, making system analysis easier. For example, suppose we have a signal source with an output power of -70 dBm, which we wish to connect to an amplifier having 22 dB gain through a cable having 8.5 dB loss. What is the output level from the amplifier? To find the answer, we just add the gains and losses as follows:

$$\text{(signal)} \quad \text{(amp. gain)} \quad \text{(cable loss)}$$

$$\text{Output} = -70 \text{ dBm} + 22 \text{ dB} + (-8.5 \text{ dB})$$

$$\text{Output} = -70 \text{ dBm} + 22 \text{ dB} - 8.5 \text{ dB}$$

$$\text{Output} = -56.5 \text{ dBm}$$

As a final note, power level may be referenced to other quantities and expressed in dB form. Below are some examples:

dBW = Decibels referenced to a power level of 1 watt

dBk = Decibels referenced to a power level of 1 kilowatt (1000 watts)

dBm0 = Decibels with respect to 1 mW at the zero (0) Transmission Level Point

dBnC = Decibels above the reference noise level for a C-weighted communications circuit

Another common usage is dBc, which is essentially a relative term with a variable reference, like dB alone. It is usually taken to mean "dB referenced to a carrier level" and is most commonly seen in radio receiver specifications regarding spurious signals or images. For example, "Spurious signals shall not exceed -50 dBc" means that spurious signals will always be at least 50 dB less than some specified carrier level present (which could mean "50 dB less than the desired signal").

For Further Study Readers wishing to pursue other applications of the decibel are encouraged to consult any of the various handbooks dealing with specific disciplines such as *Bellcore Telecommunications Transmission Engineering, Volumes 1 through 3*; *IEEE Press Subscriber Loop Signaling and Transmission Handbook (Analog)*; *ITT Radio Engineer's Handbook*; *NAB Engineering Handbook (broadcasting)*; *ARRL the Radio Amateur's Handbook*; etc.

SARC Minutes

November 2010

(Continued from page 2)

The meeting ended at 21:00

RAC: The website has a survey where they are looking for input from the amateur radio community to help them with the vision and 2011/2012 operation period for the organization. The link is: <http://www.rac.ca/en/rac/strategic-future/survey/>.

Field Day: While still a long way off work is in progress to secure Millennium Park for 2011. A community grant has been applied for to help with the cost of using this venue. Other sites will still be considered if suggestions come in. Gordon VE7GRK and John VE7XB can be contacted about other site suggestions.

Lottery Grant Application: No update is available; we are waiting on the results of the application.

Repeater Report: We are still waiting to move to the new site, this is still in progress.

Ham Class: There are 10 students, two of which are prize winners from the presentation done earlier at the local school.

Net Schedule: We need to fill the 4th Tuesday of the month net control position. This involves running the net using the

scripted format which is available on the club website. If anyone is interested please contact John VA7XB.

Christmas Party: Tentatively booked for Dec 11th 11:00 to 2:00 at the ABC restaurant located at King George and 74th. At least two more volunteers are needed to organize this. Please contact John VA7XB or Don VA7GL to assist with organizing this event.

Amateur of the Year Award: Two categories for nominations are 1) the club member who has done the most to promote the hobby, and 2) the club member who has done the most for the club this year. Please send your nominations to John VA7XB for these awards.

Tower Trailer Report: The large tower now has a new battery in the generator cabinet and the charging system for this is working. The yellow tower trailer has new tires on it, and has been serviced with grease etc.

5. A New DX Group has formed in this area. Please check out the website for more information. <http://www.orcadxccc.org>.

Bill Gipps VE7XS presented his journey creating the "Farm" radio project he has been working on. His website is http://ve7isv.com/by_the_farm.htm

Meeting adjourned at 09:10 pm

Radio-Active

Lloyd Hargrove's Early Days in Radio

For a year or more Lloyd and his friend Don Corbett shared a room on the 5th floor of the YMCA building, at 127 Metcalf Street, Ottawa. It was a 6 floor building with full facilities. Lloyd was working at the Radio Propagation Laboratories on Prince of Wales Road. Lloyd had his amateur radio license and wanted to set up a station in their room. Of course, he never asked anyone's permission. He just went ahead and did it.

There is a type of construction called 'Breadboard', where the equipment is not built in cabinets, but is built on pieces of wood plank of a suitable size, in this case about 20" X 12" X ¾". This is quick and easy to build and get at, since every thing is right out in the open.

Lloyd's transmitter was a single 813 tube and his oscillator and amplifier and a large, husky, power supply were also 'bread boarded'. This made a fearsome looking mess of open wiring, tubes, components etc. His receiver was a war surplus 1155 RCAF military radio. The whole thing took up most of a table 4' long and 30" deep.

It was sight to behold!

For an antenna, Lloyd dangled a long wire out the room window. They were, after all, on the fifth floor. He used a bit of stick to locate it between the vertical rows of windows, and by night it was completely invisible. It was pure luck that no one saw it, or touched it. Touching it, would probably give a nasty shock!

The sight of this table however, terrified the maids who cleaned the rooms. They never thought of that. The maids refused to come in although Lloyd kept saying it was harmless. The management did not lay down the 'law', but it was a more lenient time then!

When the room became unbearable, they did try to clean it. Its usual appearance was one of a collision between some mad scientist's workshop and a used clothing dump. Later, after Don moved on, Lloyd had his aerial on the roof of the building.

Lloyd made many contacts and truly enjoyed his radio station. He belonged to the local radio club and was offered a job at Computing Devices of Canada, where he later worked for 17 years.

- Beverley Hargrove

SARC President's Comments

John Brodie VA7XB



Today, I depart from the usual review of past and upcoming events. I want to express an opinion on the subject of what constitutes the "well-rounded" amateur. We are occasionally subject to critical comments from our colleagues about the legitimacy of various aspects of our hobby, such as "rag-chewing is for the old-timers", or "modern radios are too complicated" or "no-one builds equipment any more" or "contesting is boring" or "emergency response is not ham radio" or "it's an old-man's hobby" etc. We have all heard variations of these comments on the radio or in conversation, and our sympathy towards them depends on our point of view, history and outlook generally.



What these people are really saying is that some activities hold no interest for them, and that each of us tends to favour an aspect of the hobby that is satisfying or challenging and for various reasons has little interest in the

others. That's what is special about ham radio - there is something for almost everyone whether you are male or female, young or old, technically savvy or a newcomer to the hobby. In my opinion, the most satisfaction comes from having balance in your life, i.e. having a balance amongst your work, family and play.

When we reach retirement age, often the work element is missing and is the cause of much unhappiness amongst retirees as the delicate balance has been lost; many of us seek to replace work with other duties that provide the missing sense of accomplishment, whether or not that includes compensation.

The same principle holds true for the activities within our hobby. The well-rounded amateur will strive to get involved in as many activities as possible, and in doing so will find that new worlds open up. We can enjoy the fellowship aspects of ham radio by participating in the many social events that focus on it; we can fulfill the "duty" aspects by becoming involved in emergency communication programs and preparedness exercises and participating in the many community events where ham radio communication is needed. And we can satisfy the "hobby" or technical side in numerous ways such as building gear, operating in contests, participating in traffic nets, improving technical skills, etc.; the list is endless.

How you choose to find your "balance" is up to you, but you will get far more from your hobby if you overcome your natural fear of new things, stretch out and widen your interests. Join a CW class, get involved with an emergency communications group, learn more about electronic theory, build a kit or an antenna, learn how to use some new software, get involved with a traffic net, mentor beginners, participate in a contest, or help with communications at a parade. By doing any one of these things, you may breathe new life into your hobby and find that it has enlarged your world and opened up satisfying, new dimensions.

DOWN THE LOG...

SARC Monthly Meetings

2nd Wednesday (Sept-Jun)
1900 hrs local at PEP PREOC,
96th Avenue, Surrey

Weekly Club Breakfast

Friday at 0830 local
ABC Country Restaurant located
at 600 - 7380 King George Blvd.
Surrey

SARC Net

Tuesday at 2000 local
on 147.360 MHz (+) Tone=110.9

SEPARS Net

Tuesday at 19:30 local
on 147.360 MHz (+) Tone=110.9

Announcements & News

Newbie Seminar, Nov 27 from
9am-Noon at the LDS Church,
6270 126th Street, Surrey.
Please confirm attendance with
Gary VE7AS@rac.ca

SARC Christmas Party

December 11th, 11am-2pm, ABC
Country Restaurant located at
600 - 7380 King George Blvd.

On the Web ve7sar.net

Between newsletters, watch
your e-mail for announcements
of events, monthly meetings and
training opportunities. These
announcements may also be
found on our web page.



SARC hosts an Amateur
Radio net each Tuesday eve-
ning at 8 PM. Please tune in
to the VE7RSC repeater at
147.360 MHz (+600 KHz)
Tone=110.9, also accessible

on IRLP node 1980 and Echolink node
496228. On UHF we operate a re-
peater on 443.775MHz (+5Mhz)
Tone=110.9 and IRPL node 1463.
Coming soon, a repeater at
224.000MHz (-1.6MHz).

VIA THE WEB

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